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MS 2042 (2007) (English): SALTY SOY SAUCE -  
SPECIFICATION



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# **MALAYSIAN STANDARD**

**MS 2042:2007**

## **SALTY SOY SAUCE – SPECIFICATION**

**ICS: 67.230**

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## **Committee representation**

The Food and Food Products Industry Standards Committee (ISC U) under whose authority this Malaysian Standard was developed, comprises representatives from the following organisations:

Department of Agriculture Malaysia  
Department of Chemistry Malaysia  
Department of Standards Malaysia  
Federal Agricultural Marketing Authority  
Federation of Malaysian Manufacturers  
Malaysian Agricultural Research and Development Institute  
Malaysian Association of Standards Users  
Malaysian Institute of Food Technology  
Malaysian Palm Oil Association  
Malaysian Palm Oil Board  
Ministry of Agriculture and Agro-Based Industry  
Ministry of Health Malaysia  
Ministry of International, Trade and Industry  
Ministry of Science, Technology and Innovation (National Biotechnology Division)  
Universiti Kebangsaan Malaysia  
Universiti Putra Malaysia

The Technical Committee on Sauces and Pastes which supervised the development of this Malaysian Standard consists of representatives from the following organisations:

Amisan Products (M) Sdn Bhd  
Department of Chemistry Malaysia  
Federation of Malaysian Consumers Association  
Federation of Malaysian Manufacturers  
Malaysian Agricultural Research and Development Institute  
Ministry of Health Malaysia  
Nestle Foods (M) Sdn Bhd  
Universiti Putra Malaysia  
Yeo Hiap Seng (M) Berhad

The Working Group on Soy Sauces which developed this Malaysian Standard consists of representatives from the following organisations:

Adabi Consumer Industries Sdn Bhd  
Kong Guan Sauce & Food Manufacturing Company Sdn Bhd  
Kum Thim Food Industry Sdn Bhd  
Lee Kum Kee (Malaysia) Sdn Bhd  
Malaysian Agricultural Research and Development Institute  
Malaysian Association of Standards Users  
Ministry of Health Malaysia  
SIRIM Berhad (Secretariat)  
SIRIM QAS International Sdn Bhd (Certification Section)  
Syarikat Salmi Hj Tamin Sdn Bhd  
Universiti Sains Malaysia  
Yuen Chun Industries Sdn Bhd  
Zara Foodstuff Industries Sdn Bhd

## **FOREWORD**

This Malaysian Standard was developed by the Working Group on Soy Sauces and supervised by the Technical Committee on Sauces and Paste, under the authority of the Food and Food Products Industry Standards Committee.

Compliance with a Malaysian Standard does not of itself confer immunity from legal obligations.

## SALTY SOY SAUCE - SPECIFICATION

### 1. Scope

This Malaysian Standard prescribes the requirements for salty (kicap masin or kicap lemak masin) soy sauces produced by the fermentation process.

### 2. Normative references

The following normative references are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the normative references (including any amendments) applies.

Malaysian Food Act 1983 and Food Regulations 1985

MS 1120, *Sauces – Sampling and Test Methods*

### 3. Definition

For the purpose of this standard, the following definition applies.

#### Soy sauce

Soy sauce is a seasoning product for edible purposes prepared from the fermentation of soya bean and/or defatted soya bean, *Aspergillus oryzae* and/or *Aspergillus sojae* and grain/flour (wheat, rice, maize or tapioca), in a solution of brine (edible salt /sodium chloride). It may contain sweetening substance (such as sucrose, dextrose and liquid glucose), caramel (as colouring substance), molasses, permitted preservatives and permitted flavour enhancer.

NOTE. After this, wherever the word 'soy sauce' appears in this standard, it is referred to as 'salty soy sauce', unless otherwise specified.

### 4. Requirements

4.1 The soy sauce shall be pasteurised and/or heat treated product made from the following ingredients.

#### 4.1.1 Basic ingredients:

- a) soya bean and/or defatted soya bean;
- b) grain/flour (wheat, rice, maize or tapioca);
- c) edible salt (sodium chloride); and
- d) potable water.



**4.1.2 Other permitted ingredients:**

- a) sweetening substance, such as sucrose, dextrose and liquid glucose; and
- b) molasses.

**4.2** Raw materials used for the manufacture of soy sauce shall conform to the appropriate Malaysian Standards.

**4.3** It may contain the following preservative at a level permitted by the Malaysian Food Regulations 1985;

- a) benzoic acid or sodium benzoate;
- b) sorbic acid or its sodium, calcium or potassium salts; or
- c) sulphur dioxide or sulphites.

NOTE. Where the use of more than one of the above preservatives, the amount of each shall be such that when expressed as a percentage of the amount permitted singly, the sum of the several percentages does not exceed one hundred.

**4.4** It may contain the following flavour enhancer at the level permitted by the Malaysian Food Regulations 1985:

- a) monosodium L-glutamate;
- b) disodium 5'-guanylate;
- c) disodium 5'-inosinate;
- d) disodium 5'-ribonucleotides; and
- e) yeast extract.

**4.5** It shall be free from any foreign matter.

**4.6** It shall not contain any non-nutritive sweetening substance.

**4.7** It shall not contain any added colouring substance except caramel.

**4.8** It shall not contain hydrolysed vegetable protein.

**4.9** It shall not contain any other additives not otherwise specified.

**4.10** The aroma and taste shall be characteristic of soy sauce.

**4.11** 3-Monochloropropane-1,2-Diol (3-MCPD) shall not be detected in fermented soy sauce as stipulated in the Malaysian Food Regulations 1985.

**4.12** Soy sauce shall comply with the requirements in Table 1.

Table 1. Requirements for salty soy sauce

Parameter	Requirements
Total solid, % w/w, min	35
pH, max	4.8
Salt (as sodium chloride), % w/v, min	10.0
Total nitrogen, % w/v, min	0.8
Halophilic yeast, count per ml	< 100
Specific gravity, min	1.2

## 5. Hygiene

The product shall be processed and packed under hygienic conditions in premises licensed in accordance with the public health legislations currently enforced in Malaysia.

## 6. Packing and labelling

**6.1** The product shall be packed in clean glass, polyethylene tetrathalate (PET) containers or other suitable containers. The containers shall be properly sealed.

**6.2** Each container shall be marked legibly and indelibly or a label shall be attached to the container, with the following information:

- a) Name of the product.
- b) Name and address of the manufacturer and/or packer or the owner of the rights of manufacture or packing or the agent of any of them.
- c) Minimum nett weight or volume.
- d) List of ingredients in descending order of proportions used in the product, as per labelling requirements stipulated in the Malaysian Food Act 1983 and Food Regulations 1985.
- e) If preservative is added, the word "contain permitted preservative" shall be written on the label.
- f) If flavour enhancer is added, the words "contains (state the chemical name of the flavour enhancer) as permitted flavour enhancer" shall be written on the label.
- g) Code number or marking device indicating date, month and year of manufacture.
- h) Date of expiry in capital letters.

- i) In the case of food produced, prepared or packaged in Malaysia it shall be in Bahasa Malaysia and may include translation in other languages.

## **7. Legal requirements**

The product, in all other aspects shall comply with the requirements of the legislations currently in force in Malaysia.

## **8. Sampling and testing**

**8.1** Sampling and testing shall be carried out as prescribed in MS 1120.

**8.2** The validated extraction procedure for 3-MCPD utilised isotope dilution with the resulting extract derivatised via acid-catalysed addition of acetone to 3-MCPD. The extract is subsequently analysed using the gas chromatograph mass spectrometer. The validated detection limit is 2 ppb and the limit of quantification is 5 ppb.

## **9. Compliance**

Upon testing, when each of the samples is found to conform to the requirements specified in the standard, the lot, batch or consignment from which the samples have been drawn shall be deemed to comply with this standard.

## **10. Certification mark**

Each container may, by arrangement with a recognised certification body, be marked with the certification mark of that body, provided the product conforms to the requirements of this standard.

## Acknowledgements

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